

What is claimed is:

1. A composition of matter comprising 29p protein having bound thereto an agent whose delivery into a eukaryotic cell is desired, which composition of matter enters the cell upon contact therewith.
2. The composition of matter of claim 1, wherein the agent is a protein or a peptide.
3. The composition of matter of claim 1, wherein the agent is a nucleic acid molecule.
4. The composition of matter of claim 1, wherein the agent is an organic compound.
5. A composition of matter comprising a 29p protein having operably affixed thereto a lipid-soluble moiety which permits the protein to be anchored to a lipid membrane.
6. A lipid vesicle comprising the composition of matter of claim 5 anchored thereto via its lipid-soluble moiety, such that the 29p protein is situated on the vesicle's outer surface and facilitates delivery of the vesicle's contents into a eukaryotic cell when the vesicle is contacted therewith.
7. The lipid vesicle of claim 6, wherein the vesicle's contents comprise an agent whose delivery into a cell is desired.
8. A monoclonal antibody which specifically binds to 29p

protein.

- 5 9. A method for delivering an agent into a eukaryotic cell comprising contacting the agent with the cell, wherein the agent has bound thereto 29p protein which enters the cell upon contact therewith, thereby delivering the agent into the cell.
- 10 10. A method for causing a eukaryotic cell to secrete a desired protein in the form of a fusion protein, comprising introducing into the cell a vector for expressing a fusion protein that comprises the desired protein and 29p protein operably affixed thereto, whereby the cell expresses the fusion protein and the 29p protein thereof permits the fusion protein's exit from the cell, thereby causing the cell to secrete the desired protein in the form of a fusion protein.
- 20 11. The method of claim 9 or 10, wherein the eukaryotic cell is a human cell.
- 25 12. A pharmaceutical composition comprising (a) a composition of matter comprising 29p protein having bound thereto a therapeutic or prophylactic agent, which composition of matter enters a eukaryotic cell upon contact therewith, and (b) a pharmaceutically acceptable carrier.
- 30 13. A pharmaceutical composition comprising a pharmaceutically acceptable carrier, and a lipid vesicle comprising (a) a therapeutic or prophylactic agent therein, and (b) a 29p protein having operably

affixed thereto a lipid-soluble moiety, which protein (i) is anchored to the vesicle via its lipid-soluble moiety, (ii) is situated on the vesicle's outer surface, and (iii) facilitates delivery of the agent into a eukaryotic cell when the vesicle is contacted therewith.

14. A method for treating a subject afflicted with a disorder comprising administering to the subject a therapeutically effective amount of the pharmaceutical composition of claim 12 or 13, wherein the therapeutic agent therein is known to ameliorate the disorder.

15. The method of claim 14, wherein the subject is human.

16. A method for inhibiting the onset of a disorder in a subject comprising administering to the subject a prophylactically effective amount of the pharmaceutical composition of claim 12 or 13, wherein the prophylactic agent therein is known to inhibit the disorder's onset.

17. The method of claim 16, wherein the subject is human.

18. A nucleic acid molecule which hybridizes to at least a portion of a nucleic acid molecule encoding 29p protein.

19. The nucleic acid molecule of claim 18, wherein the nucleic acid molecule encoding 29p protein has the sequence shown in Figure 6.

20. The nucleic acid molecule of claim 19 which is complementary to the nucleic acid molecule having the sequence shown in Figure 6.

5 21. The nucleic acid molecule of claim 18, wherein the nucleic acid molecule is labeled with a detectable marker.

10 22. A method for detecting the presence of a 29p protein-encoding nucleic acid molecule in a sample comprising the steps of (a) contacting the sample with the detectable nucleic acid molecule of claim 21 under conditions permitting it to hybridize to a 29p protein-encoding nucleic acid molecule if present in
15 the sample, and (b) detecting the presence of any detectable nucleic acid molecule so hybridized, thereby detecting the presence of a 29p protein-encoding nucleic acid molecule in the sample.

20 23. A method for quantitatively determining the amount of 29p protein-encoding nucleic acid molecule in a sample comprising the steps of (a) contacting the sample with the detectable nucleic acid molecule of claim 21 under conditions permitting it to hybridize
25 to any 29p protein-encoding nucleic acid molecule present in the sample, (b) quantitatively determining the amount of detectable nucleic acid molecule so hybridized, and (c) comparing this amount to a known standard, thereby quantitatively determining the
30 amount of 29p protein in the sample.